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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,236	12/07/2000	Ioannis Pavlidis	H0001166	9502

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Attention: John G. Shudy, Jr.
Honeywell International Inc.
Law Department AB2
P.O. Box 2245
Morristown, NJ 07962-9806

EXAMINER

TABATABAI, ABOLFAZL

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 01/29/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

[Handwritten signature]

Office Action Summary

Application No.

09/732,236

Applicant(s)

PAVLIDIS, IOANNIS

Examiner

Abolfazl Tabatabai

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 23, 25-27, 29 and 32-37 is/are rejected.
- 7) ☐ Claim(s) 22, 24, 28, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Response to Argument/arguments

1. Applicant's arguments, (pages 2-6), filed on October 31, 2003 with respect to the rejection(s) of claim(s) 1-21, 23, 25-27, 29 and 32-37 under HacsKaylo (U S 4,500,784) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of HacsKaylo (U S 4,500,784) and Udden et al (U S 5,180,907).
2. Applicant's arguments filed, on October 31, 2003, has been entered and made of record.
3. Applicant's arguments have been fully considered but they are not persuasive.
4. Applicant argues in essence that the prior art does not teach or suggest detecting reflection from at least one portion of a head of a human body in at least a portion of an upper band of the near infrared spectrum.
5. Examiner disagrees and indicates that HacsKaylo teaches detecting reflection from at least one portion of a head of a human body in at least a portion of an upper band of the near infrared spectrum (column 1, lines 60-64).
6. Applicant argues in essence that the prior art does not teach or suggest the step of comparing the data to at least one threshold reference reflection.
7. Examiner disagrees and indicates that Smooth teaches the step of comparing the data to at least one threshold reference reflection (see column 4, lines 41-49).
8. Applicant argues in essence that the prior art does not teach or suggest control of an illumination source.

9. Examiner disagrees and indicates that Smooth teaches the step of control of an illumination source (see column 4, lines 14-20 and 49-53).

Double Patenting

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claims 1-37 are provisionally rejected less than 35 U.S.C. 101 as claiming the same invention as that of claims 1-37 of copending Application No. 10,308,465. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-7, 14-19-21, 23, 27, 29 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hacskaylo (U S 4,500,784) in view of Udden et al (U S 5,180,907).

Regarding claim 1, Hacskaylo discloses a method for use in detection of a person disguised with one or more artificial materials, the method comprising:

detecting reflection from at least one portion of a head of a human body in at least a portion of an upper band of the near infrared spectrum (column 1, lines 60 64).

However, Hacskaylo is silent about specific details the regarding the step of:

determining the presence of an artificial material associated with the head of the human body based on the detected reflection.

In the same field of endeavor, however, Udden discloses a system for measuring intensity variations of light to the human eye such as IR- light comprising the presence of an artificial material associated with the head of the human body based on the detected reflection (column 7, lines 32-39).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an artificial material associated with the head of the human body based on the detected reflection as taught by Udden in the system of Hacskaylo because Udden provides Hacskaylo a system for measuring intensity variations of light to the human eye such as IR-light and also contemplates a process for measuring the movements of a person's eye, illuminating the eye with light pulse, measuring the light reflected during the time between pulses , evaluating the measured

values obtained to provide first rough values of the eye movement and values indicating the movement of the person, s head correcting.

Regarding claim 2, Hacskaylo discloses at least a portion of the upper band of the near infrared spectrum is at least a portion within the range of $1.4\mu\text{m}$ and above in upper band of the near infrared spectrum (see Tables I and II).

Regarding claim 3, Hacskaylo discloses at least a portion of the upper band of the near infrared spectrum is at least a portion within the range of $1.4\mu\text{m}$ to $2.4\mu\text{m}$ in the upper band of the near infrared spectrum (see Tables I and II).

Regarding claim 4, Hacskaylo discloses at least a portion of the upper band of the near infrared spectrum is at least a portion within the range of $1.4\mu\text{m}$ to $1.7\mu\text{m}$ in the upper band of the near infrared spectrum (see Tables I and II).

Regarding claim 5, Hacskaylo discloses detecting reflection comprises detecting reflection from at least a skin portion of the head of the human body (column 2, lines 39-45).

Claim 6, is similarly analyzed as claim 5, above.

Regarding claim 7, Hacskaylo is silent about a method wherein the specific, details regarding the step of determining the presence of an artificial material associated with the head of the human body comprises displaying to a user a representation of the detected reflection of the at least one portion of the head of the human body.

In the same field of endeavor, however, Udden discloses a system for measuring intensity variations of light to the human eye such as IR- light comprising displaying to a

user a representation of the detected reflection of the at least one portion of the head of the human body (column 7, lines 26-39).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use displaying to a user representation of the detected reflected of at least one portion of the head of a human body as taught by Udden in the system of Hacskaylo because Udden provides Hacskaylo a system measuring intensity variations of light to the human eye such as IR-light and also contemplates a process for measuring the movements of a person's eye, illuminating the eye with light pulse, measuring the light reflected during the time between pulses , evaluating the measured values obtained to provide first rough values of the eye movement and values indicating the movement of the person, s head correcting.

Regarding claim 14, Hacskaylo discloses the method further comprising the step of illuminating the at least a portion of the head of the human body using an illumination source matched to the at least a portion of the upper band of the near infrared spectrum (column 2, lines 55-69 and column 3, lines 1-13).

Regarding claim 15, Hacskaylo discloses the method further comprises:

detecting an illumination level proximate the head of the human body (column 1, lines 60-64) and controlling the illumination source based on the detected illumination level to maintain a desired illumination level on the head of the human body (column 3, lines 19-20 and column 4, lines 1-6).

Claim 16, is similarly analyzed as claim 1, above.

Claim 17, is similarly analyzed as claim 2, above.

Claim 18, is similarly analyzed as claim 3, above.

Claim 19, is similarly analyzed as claim 4, above.

Claim 20, is similarly analyzed as claim 7, above.

Claim 21, is similarly analyzed as claim 11, above.

Claim 23, is similarly analyzed as claim 1, above.

Claim 27, is similarly analyzed as claim 14, above.

Claim 29, is similarly analyzed as claim 1, above.

Claim 33, is similarly analyzed as claim 3, above.

Claim 34, is similarly analyzed as claim 4, above.

Claim 35, is similarly analyzed as claim 5, above.

Claim 36, is similarly analyzed as claim 6, above.

Claim 37, is similarly analyzed as claim 7, above.

14. Claims 8-13, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hacskaylo (U S 4,500,784) and Udden et al(U S 5,180,907) as applied to claims 1,16 and 29 and further in view in view of Smoot (U S 5,940,139).

Regarding claim 8, Hacskaylo discloses the method of determining the presence of an artificial material associated with the head of the human body comprises:

generating data representative of the detected reflection (column 2, lines 39-45)

While Hacskaylo and Udden are silent about comparing the data to at least one threshold reference reflection level.

In the same field of endeavor, however, Smooth discloses a system for background extraction comprising the step of comparing the data to at least one threshold reference reflection level (column 4, lines 41-49).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use comparing the data to at least one threshold reference reflection level as taught by Smoot in the system of Hacskaylo because Smooth provides Hacskaylo a system for a background extraction and relates to a photography and extracting objects from a composite scene being shot by a video camera. The infrared light output is used as a key for object extraction. Extraction may be achieved by lighting a first object in visible light and lighting a second object in infrared and visible light, so the infrared light camera output is used as a key to remove the second object from the visible light camera output. This system has many advantages such as no "blue screen" or specially prepared studio is required; the color shame of the foreground is not limited; teleconferees can select to see (or not see) any other conferee's natural background selection.

Regarding claim 9, Hacskaylo and Udden are silent about the method, wherein generating data representative of the detected reflection comprises focusing the reflection on a pixel array that is sensitive to the at least a portion of the upper band of the near infrared spectrum, and generating a signal representative of the spectral power for each of a plurality of pixels of the pixel array to be used for the comparison to the at least one threshold reference reflection level.

In the same field of endeavor, however, Smooth discloses a system for background extraction comprising the step of generating data representative of the detected reflection comprises focusing the reflection on a pixel array that is sensitive to the at least a portion of the upper band of the near infrared spectrum, and generating a signal representative of the spectral power for each of a plurality of pixels of the pixel array to be used for the comparison to the at least one threshold reference reflection level (column 4, lines 41-58).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use focusing the reflection on a pixel array that is sensitive to the at least a portion of the upper band of the near infrared spectrum, and generating a signal representative of the spectral power for each of a plurality of pixels of the pixel array to be used for the comparison to the at least one threshold reference reflection level as taught by Smoot in the system of Hacskaylo because Smooth provides Hacskaylo a system for a background extraction and relates to a photography and extracting objects from a composite scene being shot by a video camera. The infrared light output is used as a key for object extraction. Extraction may be achieved by lighting a first object in visible light and lighting a second object in infrared and visible light, so the infrared light camera output is used as a key to remove the second object from the visible light camera output. This system has many advantages such as no "blue screen" or specially prepared studio is required; the color shade of the foreground is not limited; teleconferees can select to see (or not see) any other conferee's natural background selection.

Claim 10, is similarly analyzed as claim 9 above.

Claim 11, is similarly analyzed as claim 1 above.

Claims 12, 13, 25 and 26 are similarly analyzed as claim 9 above.

Allowable Subject Matter

15. Claims 22, 24, 28, 30, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

16. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U. S. Patent (U S 5,866,887) to Hashimoto et al is cited for apparatus for detecting the

number of passes.

U.S. Patent (U S 6,498,564) to Oda is cited for tacking and monitoring system.

U S. Patent (U S 5,792,050) to Alam et al is cited for near-infrared noninvasive spectroscopic determination of PH.

U S. Patent (U S 6,353,764 B1) to Imagawa et al is cited for control method.

Contact Information

Art Unit: 2625

17. any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (703) 306-5917.

The examiner can normally be reached on Monday through Thursday from 9:30 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Bhavesh Mehta M, can be reached at (703) 308-5246.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for **formal** communications; please mark
"EXPEDITED PROCEDURE")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. Sixth Floor (Receptionist).

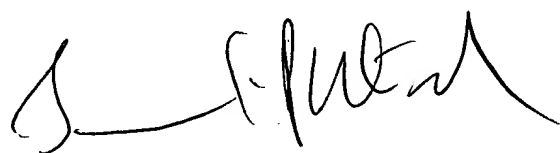
Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750

Abolfazl Tabatabai

Patent Examiner

Group Art Unit 2625

January 21, 2004



Jayanti K. Patel
Primary Examiner